Statement of Basis

Permit to Construct No. P-2015.0033
Project ID 62346

Johnson Thermal Systems Inc.
Caldwell, Idaho

Facility ID 027-00150

Final

March 17, 2020
Kelli Wetzel KW
Permit Writer

The purpose of this Statement of Basis is to satisfy the requirements of IDAPA 58.01.01.et seq, Rules for the Control of Air Pollution in Idaho, for issuing air permits.

ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE

AAC	acceptable ambient concentrations
AACC	acceptable ambient concentrations for carcinogens
acfm	actual cubic feet per minute
ASTM	American Society for Testing and Materials
Btu	British thermal units
CAA	Clean Air Act
cfm	cubic feet per minute
CFR	Code of Federal Regulations
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	CO_2 equivalent emissions
DEQ	Department of Environmental Quality
dscf	dry standard cubic feet
EL	screening emission levels
EPA	U.S. Environmental Protection Agency
GACT	Generally Available Control Technology
gph	gallons per hour
gpm	gallons per minute
gr	grains (1 lb = 7,000 grains)
HAP	hazardous air pollutants
hr/yr	hours per consecutive 12 calendar month period
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
JTS	Johnson Thermal Systems Inc.
km	kilometers
lb/hr	pounds per hour
lb/qtr	pound per quarter
m	meters
MACT	Maximum Achievable Control Technology
MMBtu	million British thermal units
MMscf	million standard cubic feet
NAAQS	National Ambient Air Quality Standard
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_2	nitrogen dioxide
NO_X	nitrogen oxides
NSPS	New Source Performance Standards
O&M	operation and maintenance
O_2	oxygen
PAH	polyaromatic hydrocarbons
PC	permit condition
PM	particulate matter
$PM_{2.5}$	particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
POM	polycyclic organic matter
ppm	parts per million
ppmw	parts per million by weight
PSD	Prevention of Significant Deterioration
psig	pounds per square inch gauge
PTC	permit to construct
PTC/T2	permit to construct and Tier II operating permit
PTE	potential to emit

PW	process weight rate
Rules	*Rules for the Control of Air Pollution in Idaho*
scf	standard cubic feet
SCL	significant contribution limits
SIP	State Implementation Plan
SM	synthetic minor
SM80	synthetic minor facility with emissions greater than or equal to 80% of a major source threshold
SO_2	sulfur dioxide
SO_x	sulfur oxides
T/day	tons per calendar day
T/hr	tons per hour
T/yr	tons per consecutive 12 calendar month period
T2	Tier II operating permit
TAP	toxic air pollutants
U.S.C.	United States Code
VOC	volatile organic compounds
yd^3	cubic yards
$\mu g/m^3$	micrograms per cubic meter

FACILITY INFORMATION

Description

Johnson Thermal Systems Inc. (JTS) operates an existing refrigeration and power enclosure manufacturing facility which is located on Slipstream Way in Caldwell, ID. Facility operations include seven natural gas heating units including shop heaters, two paint booth heaters, and a drying kiln heater, abrasive blasting, plasma cutting to cut steel and stainless steel tubing, welding, grinding and sanding, wet painting, and powder coating.

Permitting History

The following information was derived from a review of the permit files available to DEQ. Permit status is noted as active and in effect (A) or superseded (S).

September 30, 2015	P-2015.0033, Initial Automotive Coating general permit, Permit status (A, but will become S upon issuance of this permit)

Application Scope

This PTC is for a minor modification at an existing minor facility.

The applicant has proposed to include existing steel fabrication operations at the facility in the permit. These operations include natural gas-fired heaters, abrasive blasting, plasma cutting, welding, grinding and sanding, wet painting, and powder coating.

Application Chronology

December 2, 2019	DEQ received an application and an application fee.
December 6 – December 23, 2019	DEQ provided an opportunity to request a public comment period on the application and proposed permitting action.
January 2, 2020	DEQ determined that the application was complete.
February 3, 2020	DEQ made available the draft permit and statement of basis for peer and regional office review.
February 7, 2020	DEQ made available the draft permit and statement of basis for applicant review.
March 12, 2020	DEQ received the permit processing fee.
March 17, 2020	DEQ issued the final permit and statement of basis.

TECHNICAL ANALYSIS

Emissions Units and Control Equipment

Table 1 EMISSIONS UNIT AND CONTROL EQUIPMENT INFORMATION

Source ID No.	Sources	Control Equipment
P1	Plasma Cutter: Manufacturer: Hypertherm Model: Plate Pro Extreme 3100 Operation: Dry	Air Filtering System: Manufacturer: CamFill Farr Model: GS125Q PM_{10} control efficiency: 99.97%
W1 – W10	Welders: Manufacturer: Millermatic Models: 252, PipeWorx 400, Delta Weld 302 Weld Type: GMAW Number of Units: 10	Fully enclosed building
B1	Abrasive Blaster: Manufacturer: Clemco Model: 2452	None
P1 and P2	Painting Spray Gun: Manufacturer: Graco Model: Airpro 288931 Transfer Efficiency: 65% Powder Coating Gun: Manufacturer: Gena Model: OptiFlex 2 Transfer Efficiency: 65%	Paint Booth Manufacturer: Loren Cook Model: TCN-B Type: Down draft Filter: Paint Pockets Company Filter Model: PP Series Filter Type: Dry filters PM_{10} control efficiency: 99.84% Powder Coating Booth Manufacturer: Powder X Model: Unknown Type: Side draft Filter: Northland Filter Int. LLC Filter Model: 1C2430XBED221 Filter Type: Dry filters PM_{10} control efficiency: 99.97%
H1 and H2	Unit Heaters: Manufacturer: Modine Model: PDP 3505E0830SAN Max. heat input rating: 0.35 MMBtu /hr Fuel: Natural Gas Number of Units: 2	None
H3 and H4	Shop Floor Heaters: Manufacturer: Prestige Model: SOLO-399 Max. heat input rating: 0.399 MMBtu /hr Fuel: Natural Gas Number of Units: 2	None
H5	Paint Booth Heater: Manufacturer: Trane Model: GRAA12G Max. heat input rating: 1.2 MMBtu /hr Fuel: Natural Gas Number of Units: 1	None
H6	Paint Booth Floor Heater: Manufacturer: Prestige Model: SOLO-175 Max. heat input rating: 0.17 MMBtu /hr Fuel: Natural Gas Number of Units: 1	None

Source ID No.	Sources	Control Equipment
H7	Powder Coating Dry Kiln Heater: Manufacturer: Direct-Fired Power Flame Model: FD150-PB Max. heat input rating: 1.5 MMBtu /hr Fuel: Natural Gas Number of Units: 1	None
HG1	Hand Grinders: Manufacturer: DeWalt Model: 43066	None

Emissions Inventories

Potential to Emit

IDAPA 58.01.01 defines Potential to Emit as the maximum capacity of a facility or stationary source to emit an air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the facility or source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is state or federally enforceable. Secondary emissions do not count in determining the potential to emit of a facility or stationary source.

Using this definition of Potential to Emit an emission inventory was developed for the welding, abrasive blasting, plasma cutting, and coating operations at the facility (see Appendix A) associated with this proposed project. Emissions estimates of criteria pollutant, HAP PTE were based on emission factors from AP-42, operation of 8,760 hours per year, and process information specific to the facility for this proposed project. Hand grinders were listed in Table 1, but deemed insignificant because they are listed in a "List of Activities that May be Treated as Trivial", from a July 10, 1995 EPA memorandum titled *White Paper for Streamlined Development of Part 70 Permit Applications*. Minor emissions from hand wipe cleaning and solvent recycling are included in the emission inventory tables but these processes have no specific permit requirements and are therefore not included in Table 1.

Although this facility is applying for a modified PTC, to be conservative, emissions are analyzed on a facility wide basis as if this is the initial PTC.

Uncontrolled Potential to Emit

Using the definition of Potential to Emit, uncontrolled Potential to Emit is then defined as the maximum capacity of a facility or stationary source to emit an air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the facility or source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall **not** be treated as part of its design **since** the limitation or the effect it would have on emissions **is not** state or federally enforceable.

The uncontrolled Potential to Emit is used to determine if a facility is a "Synthetic Minor" source of emissions. Synthetic Minor sources are facilities that have an uncontrolled Potential to Emit for regulated air pollutants or HAP above the applicable Major Source threshold without permit limits.

The following table presents the uncontrolled Potential to Emit for regulated air pollutants as submitted by the Applicant and verified by DEQ staff. See Appendix A for a detailed presentation of the calculations and the assumptions used to determine emissions for each emissions unit. For this facility uncontrolled Potential to Emit is based upon a worst-case for operation of the facility of 8,760 hr/yr.

Table 2 UNCONTROLLED POTENTIAL TO EMIT FOR REGULATED AIR POLLUTANTS

Source	$PM_{10}/PM_{2.5}$	SO_2	NO_X	CO	VOC
	T/yr	T/yr	T/yr	T/yr	T/yr
Point Sources					
Plasma Cutting	0.17	0.00	5.51	0.00	0.00
Welding	0.01	0.00	0.00	0.00	0.00
Abrasive Blasting	1.38	0.00	0.00	0.00	0.00
Wet Coating	0.06	0.00	0.00	0.00	30.50
Powder Coating	0.02	0.00	0.00	0.00	0.00
Heaters	0.10	0.01	1.88	1.58	0.10
Hand Grinders	*Insignificant*				
Hand Wipe Cleaning	0.00	0.00	0.00	0.00	6.61
Solvent Recycling	0.00	0.00	0.00	0.00	0.31
Total, Point Sources	**1.73**	**0.01**	**7.39**	**1.58**	**37.53**

The following table presents the uncontrolled Potential to Emit for HAP pollutants as submitted by the Applicant and verified by DEQ staff. See Appendix A for a detailed presentation of the calculations and the assumptions used to determine emissions for each emissions unit. For this facility uncontrolled Potential to Emit is based upon a worst-case for operation of the facility of 8,760 hr/yr. Then, the worst-case maximum HAP Potential to Emit was determined.

Table 3 UNCONTROLLED POTENTIAL TO EMIT FOR HAZARDOUS AIR POLLUTANTS

Hazardous Air Pollutants	PTE (T/yr)
Arsenic	2.7E-06
Benzene	3.9E-05
Beryllium	1.6E-07
Cadmium	1.5E-05
Chromium	1.0E-01
Cobalt	8.9E-02
Cumene	5.1E-03
Dichlorobenzene	2.3E-05
Ethylbenzene	2.1
Formaldehyde	1.4E-03
Hexane	3.4E-02
Hexamethylene-di-isocyanate	5.8E-03
Lead	9.4E-06
Manganese	3.4E-02
Mercury	3.5E-06
Methyl n-butyl ketone	7.4E-01
Naphthalene	2.6E-06
Nickel	5.4E-03
Polycyclic Organic Matter (POM)	1.3E-05
Selenium	3.3E-07
Toluene	1.5E-05
Total	**3.12**

Pre-Project Potential to Emit

Pre-project Potential to Emit is used to establish the change in emissions at a facility as a result of this project.

This is an existing facility. However, facility-wide emissions are being analyzed and therefore pre-project emissions are set to zero for all criteria pollutants.

Post Project Potential to Emit

Post project Potential to Emit is used to establish the change in emissions at a facility and to determine the facility's classification as a result of this project. Post project Potential to Emit includes all permit limits resulting from this project.

The following table presents the post project Potential to Emit for criteria pollutants from all emissions units at the facility as determined by DEQ staff. See Appendix A for a detailed presentation of the calculations of these emissions for each emissions unit.

Table 4 POST PROJECT POTENTIAL TO EMIT FOR REGULATED AIR POLLUTANTS

Source	$PM_{10}/PM_{2.5}$		SO_2		NO_X		CO		VOC	
	lb/hr[a]	T/yr[b]	lb/hr[a]	T/yr[b]	lb/hr[a]	T/yr[b]	lb/hr[a]	T/yr[b]	lb/hr[a]	T/yr[b]
Plasma Cutting	0.00	0.00	0.00	0.00	1.26	1.63	0.00	0.00	0.00	0.00
Welding	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Abrasive Blasting	0.12	0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wet Coating	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	10.02	8.69
Powder Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Heaters	0.02	0.10	0.003	0.01	0.43	1.88	0.36	1.58	0.02	0.10
Hand Grinders	*Insignificant*									
Hand Wipe Cleaning	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51	1.88
Solvent Recycling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.09
Post Project Totals	**0.16**	**0.64**	**0.003**	**0.01**	**1.69**	**3.51**	**0.36**	**1.58**	**10.58**	**10.76**

a) Controlled average emission rate in pounds per hour is a daily average, based on the proposed daily operating schedule and daily limits.
b) Controlled average emission rate in tons per year is an annual average, based on the proposed annual operating schedule and annual limits.

Change in Potential to Emit

The change in facility-wide potential to emit is used to determine if a public comment period may be required and to determine the processing fee per IDAPA 58.01.01.225. The following table presents the facility-wide change in the potential to emit for criteria pollutants.

Table 5 CHANGES IN POTENTIAL TO EMIT FOR REGULATED AIR POLLUTANTS

Source	$PM_{10}/PM_{2.5}$		SO_2		NO_X		CO		VOC	
	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
Pre-Project Potential to Emit	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Post Project Potential to Emit	0.16	0.64	0.003	0.01	1.69	3.51	0.36	1.58	10.58	10.76
Changes in Potential to Emit	**0.16**	**0.64**	**0.003**	**0.01**	**1.69**	**3.51**	**0.36**	**1.58**	**10.58**	**10.76**

Non-Carcinogenic TAP Emissions

A summary of the estimated PTE for emissions increase of non-carcinogenic toxic air pollutants (TAP) is provided in the following table.

Pre- and post-project, as well as the change in, non-carcinogenic TAP emissions are presented in the following table:

Table 6 PRE- AND POST PROJECT POTENTIAL TO EMIT FOR NON-CARCINOGENIC TOXIC AIR POLLUTANTS

Non-Carcinogenic Toxic Air Pollutants	Pre-Project 24-hour Average Emissions Rates for Units at the Facility (lb/hr)	Post Project 24-hour Average Emissions Rates for Units at the Facility (lb/hr)	Change in 24-hour Average Emissions Rates for Units at the Facility (lb/hr)	Non-Carcinogenic Screening Emission Level (lb/hr)	Exceeds Screening Level? (Y/N)
Acetone	0.00	2.18E-01	2.18E-01	1.19E+02	No
Aluminum Oxide	0.00	3.38E-02	3.38E-02	6.67E-01	No
Barium	0.00	1.37E-05	1.37E-05	3.30E-02	No
Calcium Carbonate	0.00	9.07E-04	9.07E-04	6.67E-01	No
Carbon Black	0.00	5.77E-06	5.77E-06	2.30E-01	No
Chromium	0.00	3.03E-05	3.03E-05	3.30E-02	No
Cobalt	0.00	2.53E-05	2.53E-05	3.30E-03	No
Copper	0.00	9.47E-06	9.47E-06	6.70E-02	No
Cumene	0.00	3.26E-04	3.26E-04	16.3	No
Cyclohexanone	0.00	5.31E-01	5.31E-01	6.67	No
Dichlorobenezene	0.00	5.14E-06	5.14E-06	2.00E+01	No
Dichlorobenzene	0.00	5.14E-06	5.14E-06	2.00E+01	No
Ethylbenzene	0.00	4.89E-01	4.89E-01	29	No
Hexamethylene-di-isocyanate	0.00	9.50E-04	9.50E-04	2.00E-03	No
Hexane	0.00	7.71E-03	7.71E-03	1.20E+01	No
Iron Oxide Fume	0.00	1.34E-03	1.34E-03	3.33E-01	No
Kaolin	0.00	3.52E-06	3.52E-06	1.33E-01	No
Manganese	0.00	7.95E-03	7.95E-03	6.70E-02	No
Mercury	0.00	8.08E-07	8.08E-07	3.00E-03	No
Methyl n-amyl Ketone	0.00	5.84E+00	5.84E+00	1.57E+01	No
Methyl -butyl Ketone	0.00	7.38E-01	7.38E-01	13.7	No
Mica	0.00	1.41E-05	1.41E-05	0.2	No
Molybdenum	0.00	5.47E-06	5.47E-06	3.33E-01	No
n-butyl Acetate	0.00	7.54E-01	7.54E-01	4.73E+01	No
Naphthalene	0.00	2.85E-01	2.85E-01	3.33E+00	No
Pentane	0.00	1.11E-02	1.11E-02	1.18E+02	No
Phenanathrene	0.00	7.28E-08	7.28E-08	9.1E-05	No
Pyrene	0.00	2.14E-08	2.14E-08	9.1E-05	No
Selenium	0.00	7.46E-08	7.46E-08	1.30E-02	No
Silica	0.00	6.58E-03	6.58E-03	6.7E-03	No
Silicon	0.00	1.57E-05	1.57E-05	6.7E-01	No
Toluene	0.00	1.46E-05	1.46E-05	2.50E+01	No
Trimethyl Benzene mixed	0.00	2.08E-02	2.08E-02	8.20E+00	No
Vanadium, as V_2O_5	0.00	7.15E-06	7.15E-06	3.00E-03	No
VM & P Naphtha	0.00	2.05E+00	2.05E+00	9.13E+01	No
Xylene (o-, m-, p-isomers)	0.00	2.93E+00	2.93E+00	2.90E+01	No
Zirconium 2-Ethylhexanoate	0.00	4.96E-06	4.96E-06	3.33E-01	No
Zinc Oxide	0.00	3.03E-04	3.03E-04	6.67E-01	No

All changes in emissions rates for non-carcinogenic TAP were below EL (screening emissions level) as a result of this project. Therefore, modeling is not required for any non-carcinogenic TAP because none of the 24-hour average non-carcinogenic screening ELs identified in IDAPA 58.01.01.585 were exceeded.

Carcinogenic TAP Emissions

A summary of the estimated PTE for emissions increase of carcinogenic toxic air pollutants (TAP) is provided in the following table.

Table 7 PRE- AND POST PROJECT POTENTIAL TO EMIT FOR CARCINOGENIC TOXIC AIR POLLUTANTS

Carcinogenic Toxic Air Pollutants	Pre-Project Annual Average Emissions Rates for Units at the Facility (lb/hr)	Post Project Annual Average Emissions Rates for Units at the Facility (lb/hr)	Change in Annual Average Emissions Rates for Units at the Facility (lb/hr)	Carcinogenic Screening Emission Level (lb/hr)	Exceeds Screening Level? (Y/N)
2-Methylnaphthalene	0.00	1.03E-07	1.03E-07	9.1E-05	No
3-Methylchloranthene	0.00	7.71E-09	7.71E-09	2.5E-06	No
Acenaphthene	0.00	7.71E-09	7.71E-09	2.5E-06	No
Acenaphthene	0.00	7.71E-09	7.71E-09	9.1E-05	No
Acenaphthylene	0.00	7.71E-09	7.71E-09	9.1E-05	No
Anthracene	0.00	1.03E-08	1.03E-08	9.1E-05	No
Arsenic	0.00	6.22E-07	6.22E-07	1.5E-06	No
Benzene	0.00	8.99E-06	8.99E-06	8.0E-04	No
Benzo(a)pyrene	0.00	5.14E-09	5.14E-09	2.0E-06	No
Benzo(g,h,i)perylene	0.00	5.14E-09	5.14E-09	9.1E-05	No
Beryllium	0.00	3.73E-08	3.73E-08	2.8E-05	No
Cadmium	0.00	3.42E-06	3.42E-06	3.7E-06	No
Chromium +6	0.00	1.44E-09	1.44E-09	9.1E-05	No
Fluoranthene	0.00	1.28E-08	1.28E-08	9.1E-05	No
Fluorene	0.00	1.20E-08	1.20E-08	9.1E-05	No
Formaldehyde	0.00	3.21E-04	3.21E-04	5.1E-04	No
Naphthalene	0.00	2.61E-06	2.61E-06	9.1E-05	No
Nickel	0.00	2.30E-05	2.30E-05	2.7E-05	No
Polyaromatic Hydrocarbon	0.00	2.92E-06	2.92E-06	9.1E-05	No
POM	0.00	4.88E-08	4.88E-08	2.0E-06	No

a) Polycyclic Organic Matter (POM) is considered as one TAP comprised of: benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, chrysene, indeno(1,2,3-cd)pyrene, benzo(a)pyrene. The total is compared to benzo(a)pyrene.

All changes in emissions rates for carcinogenic TAP were below EL (screening emissions level) as a result of this project. Therefore, modeling is not required for any carcinogenic TAP because none of the annual average carcinogenic screening ELs identified in IDAPA 58.01.01.586 were exceeded.

Post Project HAP Emissions

The following table presents the post project potential to emit for HAP pollutants from all emissions units at the facility as submitted by the Applicant and verified by DEQ staff. See Appendix A for a detailed presentation of the calculations of these emissions for each emissions unit.

Table 8 HAZARDOUS AIR POLLUTANTS EMISSIONS POTENTIAL TO EMIT SUMMARY

Hazardous Air Pollutants	PTE (T/yr)
Arsenic	2.7E-06
Benzene	3.9E-05
Beryllium	1.6E-07
Cadmium	1.5E-05
Chromium	2.1E-02
Cobalt	2.1E-02
Cumene	1.2E-03
Dichlorobenzene	2.3E-05
Ethylbenzene	5.0E-01
Formaldehyde	1.4E-03
Hexane	3.4E-02
Hexamethylene-di-isocyanate	1.4E-03
Lead	9.4E-06
Manganese	2.3E-02
Mercury	3.5E-06
Methyl n-butyl ketone	1.8E-01
Naphthalene	2.6E-06
Nickel	7.9E-05
Polycyclic Organic Matter (POM)	1.3E-05
Selenium	3.3E-07
Toluene	1.5E-05
Totals	**0.78**

Ambient Air Quality Impact Analyses

An ambient air quality impact analysis was not required for this project as none of the criteria pollutants (excluding VOC) or TAP exceeded screening emission levels.

REGULATORY ANALYSIS

Attainment Designation (40 CFR 81.313)

The facility is located in Canyon County, which is designated as attainment or unclassifiable for $PM_{2.5}$, PM_{10}, SO_2, NO_2, CO, and Ozone. Refer to 40 CFR 81.313 for additional information.

Facility Classification

The AIRS/AFS facility classification codes are as follows:

For HAPs (Hazardous Air Pollutants) Only:

A = Use when any one HAP has permitted emissions > 10 T/yr or if the aggregate of all HAPS (Total HAPs) has permitted emissions > 25 T/yr.

SM80 = Use if a synthetic minor (uncontrolled HAPs emissions are > 10 T/yr or if the aggregate of all uncontrolled HAPs (Total HAPs) emissions are > 25 T/yr and permitted emissions fall below applicable major source thresholds) and the permit sets limits > 8 T/yr of a single HAP or ≥ 20 T/yr of Total HAPs.

SM = Use if a synthetic minor (uncontrolled HAPs emissions are > 10 T/yr or if the aggregate of all uncontrolled HAPs (Total HAPs) emissions are > 25 T/yr and permitted emissions fall below applicable major source thresholds) and the permit sets limits < 8 T/yr of a single HAP and/or < 20 T/yr of Total HAPs.

B = Use when the potential to emit (i.e. uncontrolled emissions and permitted emissions) are below the 10 and 25 T/yr HAP major source thresholds.

UNK = Class is unknown.

For All Other Pollutants:

A = Use when permitted emissions of a pollutant are > 100 T/yr.

SM80 = Use if a synthetic minor for the applicable pollutant (uncontrolled emissions are > 100 T/yr and permitted emissions fall below 100 T/yr) and permitted emissions of the pollutant are ≥ 80 T/yr.

SM = Use if a synthetic minor for the applicable pollutant (uncontrolled emissions are > 100 T/yr and permitted emissions fall below 100 T/yr) and permitted emissions of the pollutant are < 80 T/yr.

B = Use when the potential to emit (i.e. uncontrolled emissions and permitted emissions) are below the 100 T/yr major source threshold.

UNK = Class is unknown.

Table 9 REGULATED AIR POLLUTANT FACILITY CLASSIFICATION

Pollutant	Uncontrolled PTE (T/yr)	Permitted PTE (T/yr)	Major Source Thresholds (T/yr)	AIRS/AFS Classification
PM	1.73	0.64	**100**	B
PM_{10}	1.73	0.64	**100**	B
$PM_{2.5}$	1.73	0.64	**100**	B
SO_2	0.01	0.01	**100**	B
NO_X	7.39	3.51	**100**	B
CO	1.58	1.58	**100**	B
VOC	37.53	10.76	**100**	B
HAP (single)	2.11	0.50	**10**	B
Total HAPs	3.12	0.78	**25**	B

Permit to Construct (IDAPA 58.01.01.201)

IDAPA 58.01.01.201 ..... Permit to Construct Required

The permittee has requested that a PTC be issued to the facility for the modified emissions source. Therefore, a permit to construct is required to be issued in accordance with IDAPA 58.01.01.220. This permitting action was processed in accordance with the procedures of IDAPA 58.01.01.200-228.

Tier II Operating Permit (IDAPA 58.01.01.401)

IDAPA 58.01.01.401 ..... Tier II Operating Permit

The application was submitted for a permit to construct (refer to the Permit to Construct section), and an optional Tier II operating permit has not been requested. Therefore, the procedures of IDAPA 58.01.01.400–410 were not applicable to this permitting action.

Visible Emissions (IDAPA 58.01.01.625)

IDAPA 58.01.01.625 ..... Visible Emissions

The sources of PM emissions at this facility are subject to the State of Idaho visible emissions standard of 20% opacity. This requirement is assured by Permit Conditions 2.4, 3.4, 4.4 and 5.4.

Fugitive Particulate Matter Emissions (IDAPA 58.01.01.650-651)

IDAPA 58.01.01.650 .....Rules for Control of Fugitive Dust

All reasonable precautions shall be taken to prevent the generation of fugitive dust. This requirement is assured by Permit Conditions 4.8.

Rules for Control of Odors (IDAPA 58.01.01.775-776)

IDAPA 58.01.01.776 .....Rules for the Control of Odors

The facility is subject to the general restrictions for the control of odors from the facility. This requirement is assured by Permit Condition 5.5.

Standards for New Sources (IDAPA 58.01.01.676)

IDAPA 58.01.01.676 .....Standards for New Sources

The fuel burning equipment located at this facility, with a maximum rated input of ten (10) million BTU per hour or more, are subject to a particulate matter limitation of 0.015 gr/dscf of effluent gas corrected to 3% oxygen by volume when combusting gaseous fuels. Fuel-Burning Equipment is defined as any furnace, boiler, apparatus, stack and all appurtenances thereto, used in the process of burning fuel for the primary purpose of producing heat or power by indirect heat transfer.

Particulate Matter – New Equipment Process Weight Limitations (IDAPA 58.01.01.701)

IDAPA 58.01.01.701 .....Particulate Matter – New Equipment Process Weight Limitations

In accordance with IDAPA 58.01.01.700.02, no source shall be required to meet an emission limit of less than 1 lb/hr as determined based on process weight rate. Reasonable control of fugitive emissions and compliance with emission limits (Permit Conditions 2.3, 3.3, 4.3, and 5.3) were considered adequate to ensure compliance with the facility-wide process weight-based PM emission limitation. The BRC threshold for $PM_{2.5}$ is more stringent than the minimum allowable process weight-based PM emission limit specified in IDAPA 58.01.01.700.02.

Title V Classification (IDAPA 58.01.01.300, 40 CFR Part 70)

IDAPA 58.01.01.301 .....Requirement to Obtain Tier I Operating Permit

Post project facility-wide emissions from this facility do not have a potential to emit greater than 100 tons per year for PM_{10}, $PM_{2.5}$, SO_2, NO_X, CO, and VOC or 10 tons per year for any one HAP or 25 tons per year for all HAP combined as demonstrated previously in the Emissions Inventories Section of this analysis. Therefore, the facility is not a Tier I source in accordance with IDAPA 58.01.01.006 and the requirements of IDAPA 58.01.01.301 do not apply.

PSD Classification (40 CFR 52.21)

40 CFR 52.21 .....Prevention of Significant Deterioration of Air Quality

The facility is not a major stationary source as defined in 40 CFR 52.21(b)(1), nor is it undergoing any physical change at a stationary source not otherwise qualifying under paragraph 40 CFR 52.21(b)(1) as a major stationary source, that would constitute a major stationary source by itself as defined in 40 CFR 52. Therefore in accordance with 40 CFR 52.21(a)(2), PSD requirements are not applicable to this permitting action. The facility is not a designated facility as defined in 40 CFR 52.21(b)(1)(i)(a), and does not have facility-wide emissions of any criteria pollutant that exceed 250 T/yr.

NSPS Applicability (40 CFR 60)

The facility is not subject to any NSPS requirements 40 CFR Part 60.

NESHAP Applicability (40 CFR 61)

The facility is not subject to any NESHAP requirements in 40 CFR 61.

MACT/GACT Applicability (40 CFR 63)

Because the facility manufactures refrigeration and power enclosures and conducts painting and coating operations, the following is an NESHAP applicability analysis for the proposed equipment:

- 40 CFR 63, Subpart MMMM – National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products.
- 40 CFR 63, Subpart HHHHHH - National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources.
- 40 CFR 63, Subpart XXXXXX - National Emission Standards for Hazardous Air Pollutants Area Source Standards for Nine Metal Fabrication and Finishing Source Categories.

40 CFR 63, Subpart MMMM ..... National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products

§ 63.3881..... Am I subject to this subpart?

Section (b) states that you are subject to this subpart if you own or operate a new, reconstructed, or existing affected source, as defined in §63.3882, that uses 946 liters (250 gallons (gal)) per year, or more, of coatings that contain hazardous air pollutants (HAP) in the surface coating of miscellaneous metal parts and products defined in paragraph (a) of this section; and that is a major source, is located at a major source, or is part of a major source of emissions of HAP.

Although JTS uses more than 250 gallons of coating that contain HAP per year, the facility is not a major source of HAP emissions and therefore the Subpart does not apply.

40 CFR 63, Subpart HHHHHH ..... National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources

§ 60.11169..... What is the purpose of this subpart?

In accordance with §63.11169, subpart HHHHHH establishes national emission standards for hazardous air pollutants (HAP) for area sources involved in auto body refinishing operations that encompass motor vehicle and mobile equipment spray-applied surface coating operations.

§ 63.11170..... Am I subject to this subpart?

Section (a) states that you are subject to this subpart if you operate an area source of HAP and perform paint stripping using MeCl for the removal of dried paint, perform spray application of coatings to motor vehicles and mobile equipment including operations that are located in stationary structures at fixed locations, and mobile repair and refinishing operations that travel to the customer's location, except spray coating applications that meet the definition of facility maintenance, or perform spray application of coatings that contain the target HAP, as defined in §63.11180, to a plastic and/or metal substrate on a part or product, except spray coating applications that meet the definition of facility maintenance or space vehicle in §63.11180.

JTS does not perform autobody refinishing operations that encompass motor vehicle and mobile equipment spray-applied surface coating operations. JTS does not perform paint stripping using methylene chloride and does not spray coatings that contain target HAP to plastic or metal parts. Therefore, the Subpart does not apply.

Also, JTS submitted a petition for exemption from 40 CFR §63.11180 to the U.S. EPA on December 5, 2018.

40 CFR 63, Subpart XXXXXX ..... National Emission Standards for Hazardous Air Pollutants Area Source Standards for Nine Metal Fabrication and Finishing Source Categories

§ 63.11514..... Am I subject to this subpart?

You are subject to this subpart if you own or operate an area source that is primarily engaged in the operations in one of the nine source categories listed in paragraphs (a)(1) through (9) of this section. Descriptions of these source categories are shown in Table 1 of this subpart. "Primarily engaged" is defined in §63.11522, "What definitions apply to this subpart?"

(1) Electrical and Electronic Equipment Finishing Operations;

(2) Fabricated Metal Products;

(3) Fabricated Plate Work (Boiler Shops);

(4) Fabricated Structural Metal Manufacturing;

(5) Heating Equipment, except Electric;

(6) Industrial Machinery and Equipment Finishing Operations;

(7) Iron and Steel Forging;

(8) Primary Metal Products Manufacturing; and

(9) Valves and Pipe Fittings.

JTS does not manufacture any of the products defined in the source categories listed and therefore the Subpart does not apply.

Permit Conditions Review

This section describes the permit conditions for this permit. Although this permit is a modification of a previous permit, the previous permit was for a general automotive coating facility and therefore all permit conditions have been renumbered and modified and will be treated as an initial permit.

Permit Condition 1.1

Permit Condition 1.1 describes this is a modified permit to construct for Johnson Thermal Systems Inc (JTS). Table 1.1 lists JTS' regulated sources and applicable control equipment, if any, as was provided by the applicant.

PLASMA CUTTING OPERATION

Permit Conditions 2.1 and 2.2

Permit Condition 2.1 describes plasma cutting operations and 2.2 lists the plasma cutter and it's control.

Permit Condition 2.3

Permit Condition 2.3 establishes NO_x emission limits for the plasma cutting operations as proposed by the Applicant and verified by DEQ staff.

Permit Condition 2.4

Permit Condition 2.4 establishes a 20% opacity limit for the plasma cutting operation stack, vents, or functionally equivalent openings associated with the plasma cutting operations and references the procedures for determining opacity in IDAPA 58.01.01.625.

Permit Condition 2.5

Permit Condition 2.5 lists the annual limit for hours of plasma cutting operations which was requested by the applicant. This assumption was used by the applicant in the emission inventory to estimate PM/PM_{10}/$PM_{2.5}$, NO_x, and TAP emissions and is necessary to demonstrate regulatory compliance.

Permit Condition 2.6

Permit Condition 2.6 establishes the material restriction for plasma cutting operations of only steel and stainless steel tubing may be processed. This is important to ensure compliance with the TAP increments.

Permit Condition 2.7

Permit Condition 2.7 specifies that the Permittee shall monitor and record operating hours of plasma cutting operations to demonstrate compliance with Permit Condition 2.5.

WELDING OPERATION

Permit Condition 3.1 and 3.2

Permit Condition 3.1 describes the welding operations and 3.2 lists welders and controls.

Permit Condition 3.3

Permit Condition 3.3 establishes welding $PM_{2.5}/PM_{10}$ emission limits as proposed by the Applicant and verified by DEQ staff.

Permit Condition 3.4

Permit Condition 3.4 establishes a 20% opacity limit for the welding operations stack, vents, or functionally equivalent openings associated with the welding operations and references the procedures for determining opacity in IDAPA 58.01.01.625.

Permit Condition 3.5

Permit Condition 3.5 establishes the annual permitted electrode material limit which is necessary to ensure regulatory compliance of PM_{10} and TAP emissions from welding.

Permit Condition 3.6

Permit Condition 3.6 require monitoring and recordkeeping for the welding operations to establish compliance with electrode usage limit in Permit Condition 3.5.

ABRASIVE BLASTING OPERATION

Permit Condition 4.1 and 4.2

Permit Condition 4.1 describes abrasive blasting operation and 4.2 lists the abrasive blaster and controls.

Permit Condition 4.3

Permit Condition 4.3 establishes abrasive blasting operation $PM_{2.5}/PM_{10}$ emission limits as proposed by the Applicant.

Permit Condition 4.4

Permit Condition 4.4 establishes a 20% opacity limit for the abrasive blasting operation stack, vents, or functionally equivalent openings associated with the abrasive blasting operations and references the procedures for determining opacity in IDAPA 58.01.01.625.

Permit Condition 4.5 and 4.6

Permit Conditions 4.5 and 4.6 establish daily and annual blasting media throughput limits necessary to comply with $PM_{2.5}/PM_{10}$ permit limits in permit condition 4.3.

Permit Condition 4.7

Permit Condition 4.7 specifies blasting media content requirements of white lightning and garnet, which is necessary to ensure regulatory compliance with $PM_{2.5}/PM_{10}$ emissions.

Permit Condition 4.8

Permit Condition 4.8 requires the Permittee to make all reasonable precautions to prevent fugitive emissions.

Permit Conditions 4.9 and 4.10

Permit Conditions 4.9 and 4.10 require the Permittee to monitor and maintain records for daily and annual throughput limits in Permit Conditions 4.5 and 4.6.

COATING OPERATION

Permit Conditions 5.1 and 5.2

Permit Condition 5.1 describes coating operations and 5.2 lists the paint booths with their control devices.

Permit Condition 5.3

Permit Condition 5.3 established the coating operations emission limits as proposed by the Applicant and verified by DEQ staff.

Permit Condition 5.4

Permit Condition 5.4 establishes a 20% opacity limit for the coating operation stack, vents, or functionally equivalent openings associated with the coating operations and references the procedures for determining opacity in IDAPA 58.01.01.625.

Permit Condition 5.5

Permit Condition 5.5 establishes odor management requirements to ensure compliance with IDAPA 58.01.01.776.

Permit Condition 5.6

Permit Condition 5.6 contains annual coating usage limits in Table 5.3 for both wet painting and powder coating.

Permit Condition 5.7

Permit Condition 5.7 establishes the approved daily coating usage scenario with daily limits.

Permit Condition 5.8

Permit Condition 5.8 requires the permittee to conduct coating activities in a spray booth.

Permit Condition 5.9

Permit Condition 5.9 specifies spray gun requirements of all painting shall be conducted with high-volume-low-pressure (HVLP) spray guns with a minimum 65% transfer efficiency.

Permit Condition 5.10

Permit Condition 5.10 requires the permittee to maintain the spray booth filtration system for both booths to ensure a minimum control efficiency of 99% for PM_{10}.

Permit Condition 5.11

Permit Condition 5.11 requires the permittee to develop and maintain an Operation and Maintenance manual that is required to be on site at all times.

Permit Condition 5.12

Permit Condition 5.12 describes a Daily Coating Usage Scenario and requirements for its use.

Permit Condition 5.13

Permit Condition 5.13 lists requirements to propose or implement a new Daily Coating Usage Scenario.

Permit Condition 5.14 and 5.15

Permit Condition 5.14 lists steps for calculating TAP emissions for a new or alternate coating to use in a Daily Coating Usage Scenario. Permit Condition 5.15 contains the method for demonstrating TAP compliance with Screening Emission Rates and Modeled Concentration Limits using Table 5.5.

Permit Condition 5.16

Permit Condition 5.16 explains the method for demonstrating compliance with $PM_{10}/PM_{2.5}$ and VOC emission limits in Table 5.2.

Permit Condition 5.17

Permit Condition 5.17 contains monitoring and recordkeeping requirements for a Daily Coating Usage Scenario.

Permit Condition 5.18

Permit Condition 5.18 contains daily monitoring and recordkeeping requirements.

Permit Condition 5.19

Permit Condition 5.19 contains requirements for Safety Data Sheet recordkeeping.

Permit Condition 5.20

Permit Condition 5.20 contains requirements for coating usage scenario reporting.

Permit Condition 5.21

Permit Condition 5.21 contains requirements for paint booth filter recordkeeping.

Permit Condition 5.22

Permit Condition 5.22 contains requirements for spray gun recordkeeping.

Permit Condition 5.23

Permit Condition 5.23 contains requirements for odor complaints recordkeeping.

PUBLIC REVIEW

Public Comment Opportunity

An opportunity for public comment period on the application was provided in accordance with IDAPA 58.01.01.209.01.c or IDAPA 58.01.01.404.01.c. During this time, there was not a request for a public comment period on DEQ's proposed action. Refer to the chronology for public comment opportunity dates.

APPENDIX A – EMISSIONS INVENTORIES

Tables 4-1a to 4-1c Facility-Wide Unrestricted Criteria Regulated Pollutant Emissions
Johnson Thermal Systems, Inc.

Table 4-1a: Pre-Project Potential to Emit

Emissions Unit	$PM_{2.5}$	PM_{10}	SO_2	NO_2	CO	VOC	Lead	Greenhouse Gases CO_2e
	tons/yr							
Heaters	0	0	0	0	0	0	0	0
Abrasive Blasting	0	0	0	0	0	0	0	0
Plasma Cutting	0	0	0	0	0	0	0	0
Welding	0	0	0	0	0	0	0	0
Hand Wipe Cleaning	0	0	0	0	0	0	0	0
Wet Painting	0	0	0	0	0	0	0	0
Solvent Recycling	0	0	0	0	0	0	0	0
Powder Painting	0	0	0	0	0	0	0	0
Grinding	0	0	0	0	0	0	0	0
Total =	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Table 4-1b: Post-Project Potential to Emit (based on maximum continuous operations)

Emissions Unit	$PM_{2.5}$	PM_{10}	SO_2	NO_2	CO	VOC	Lead	Greenhouse Gases CO_2e
	tons/yr							
Heaters	1.0E-01	1.0E-01	1.1E-02	1.9E+00	1.6E+00	1.0E-01	9.4E-06	2.2E+03
Abrasive Blasting	1.4E+00	1.4E+00	0	0	0	0	0	0
Plasma Cutting	1.7E-01	1.7E-01	0	5.5E+00	0	0	0	0
Welding	5.7E-03	5.7E-03	0	0	0	0	0	0
Hand Wipe Cleaning	0	0	0	0	0	6.6E+00	0	0
Wet Painting	6.0E-02	6.0E-02	0	0	0	3.1E+01	0	0
Solvent Recycling	0	0	0	0	0	3.1E-01	0	0
Powder Painting	1.5E-02	1.5E-02	0	0	0	0	0	0
Grinding								
Total =	**1.7E+00**	**1.7E+00**	**1.1E-02**	**7.4E+00**	**1.6E+00**	**3.8E+01**	**9.4E-06**	**2.2E+03**

Table 4-1c: Changes in Potential to Emit (based on maximum continuous operations)

Emissions Unit	$PM_{2.5}$	PM_{10}	SO_2	NO_2	CO	VOC	Lead	Greenhouse Gases CO_2e
	tons/yr							
Heaters	1.0E-01	1.0E-01	1.1E-02	1.9E+00	1.6E+00	1.0E-01	9.4E-06	2.2E+03
Abrasive Blasting	1.4E+00	1.4E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Plasma Cutting	1.7E-01	1.7E-01	0.0E+00	5.5E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Welding	5.7E-03	5.7E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Hand Wipe Cleaning	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	6.6E+00	0.0E+00	0.0E+00
Wet Painting	6.0E-02	6.0E-02	0.0E+00	0.0E+00	0.0E+00	3.1E+01	0.0E+00	0.0E+00
Solvent Recycling	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	3.1E-01	0.0E+00	0.0E+00
Powder Painting	1.5E-02	1.5E-02	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Grinding	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Total =	**1.7E+00**	**1.7E+00**	**1.1E-02**	**7.4E+00**	**1.6E+00**	**3.8E+01**	**9.4E-06**	**2.2E+03**

Tables 4-2a to 4-2c Facility-Wide Restricted Criteria Regulated Pollutant Emissions
Johnson Thermal Systems, Inc.

Table 4-2a: Pre-Project Potential to Emit (based on existing permit conditions)

Emissions Unit	$PM_{2.5}$	PM_{10}	SO_2	NO_2	CO	VOC	Lead	Greenhouse Gases CO_2e
	tons/yr							
Heaters	0	0	0	0	0	0	0	0
Abrasive Blasting	0	0	0	0	0	0	0	0
Plasma Cutting	0	0	0	0	0	0	0	0
Welding	0	0	0	0	0	0	0	0
Hand Wipe Cleaning	0	0	0	0	0	0	0	0
Wet Painting	0	0	0	0	0	0	0	0
Solvent Recycling	0	0	0	0	0	0	0	0
Powder Painting	0	0	0	0	0	0	0	0
Grinding	0	0	0	0	0	0	0	0
Total =	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Table 4-2b: Post-Project Potential to Emit (based on requested permit conditions)

Emissions Unit	$PM_{2.5}$	PM_{10}	SO_2	NO_2	CO	VOC	Lead	Greenhouse Gases CO_2e
	tons/yr							
Heaters	1.0E-01	1.0E-01	1.1E-02	1.9E+00	1.6E+00	1.0E-01	9.4E-06	2.2E+03
Abrasive Blasting	5.2E-01	5.2E-01	0	0	0	0	0	0
Plasma Cutting	7.9E-06	7.9E-06	0	1.6E+00	0	0	0	0
Welding	3.7E-03	3.7E-03	0	0	0	0	0	0
Hand Wipe Cleaning	0	0	0	0	0	1.9E+00	0	0
Wet Painting	1.7E-02	1.7E-02	0	0	0	8.7E+00	0	0
Solvent Recycling	0	0	0	0	0	8.9E-02	0	0
Powder Painting	4.3E-03	4.3E-03	0	0	0	0	0	0
Grinding								
Total =	**6.5E-01**	**6.5E-01**	**1.1E-02**	**3.5E+00**	**1.6E+00**	**1.1E+01**	**9.4E-06**	**2.2E+03**

Table 4-2c: Changes in Potential to Emit

Emissions Unit	$PM_{2.5}$	PM_{10}	SO_2	NO_2	CO	VOC	Lead	Greenhouse Gases CO_2e
	tons/yr							
Heaters	1.0E-01	1.0E-01	1.1E-02	1.9E+00	1.6E+00	1.0E-01	9.4E-06	2.2E+03
Abrasive Blasting	5.2E-01	5.2E-01	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Plasma Cutting	7.9E-06	7.9E-06	0.0E+00	1.6E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Welding	3.7E-03	3.7E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Hand Wipe Cleaning	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	1.9E+00	0.0E+00	0.0E+00
Wet Painting	1.7E-02	1.7E-02	0.0E+00	0.0E+00	0.0E+00	8.7E+00	0.0E+00	0.0E+00
Solvent Recycling	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	8.9E-02	0.0E+00	0.0E+00
Powder Painting	4.3E-03	4.3E-03	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Grinding	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00	0.0E+00
Total =	**6.5E-01**	**6.5E-01**	**1.1E-02**	**3.5E+00**	**1.6E+00**	**1.1E+01**	**9.4E-06**	**2.2E+03**

Table 4-3 Criteria Pollutant Restricted Controlled Emissions
Johnson Thermal Systems, Inc.

Max Restricted Controlled PTE Criteria Air Pollutants	Estimated Emission Rate (T/yr)	10% Significant Emission Rate (T/yr)	BRC Exemption Below 10% Sig. Rate? (Y/N)
NO_2	3.51E+00	4	Yes
CO	1.58E+00	10	Yes
PM	6.48E-01	2.5	Yes
PM_{10}	6.48E-01	1.5	Yes
$PM_{2.5}$	6.48E-01	1	Yes
SOx	1.13E-02	4	Yes
VOC	1.08E+01	4	No
Lead	9.38E-06	0.06	Yes

Table 4-4 Facility-Wide Toxic Air Pollutant Emissions
Johnson Thermal Systems, Inc.

Non-Carcinogenic Toxic Air Pollutant (24 hr Average)	Restricted Controlled Hourly Emissions		Controlled Emission Change (lb/hr)	Screening Emission Level (lb/hr)	Controlled Emission Exceeds TAP EL?
	Pre-Project (lb/hr)	Post Project (lb/hr)			
acetone	0	2.18E-01	2.18E-01	1.19E+02	No
aluminum oxide	0	3.38E-02	3.38E-02	6.67E-01	No
Barium	0	1.37E-05	1.37E-05	3.30E-02	No
calcium carbonate	0	9.07E-04	9.07E-04	6.67E-01	No
carbon black	0	5.77E-06	5.77E-06	2.30E-01	No
Chromium	0	3.03E-05	3.03E-05	3.30E-02	No
Cobalt	0	2.53E-05	2.53E-05	3.30E-03	No
Copper	0	9.47E-06	9.47E-06	6.70E-02	No
cumene	0	3.26E-04	3.26E-04	16.3	No
Cyclohexanone	0	5.31E-01	5.31E-01	6.67	No
Dichlorobenezene	0	5.14E-06	5.14E-06	2.00E+01	No
Dichlorobenzene	0	5.14E-06	5.14E-06	2.00E+01	No
ethyl alcohol	0	0.00E+00	0.00E+00	1.25E+02	No
ethylbenzene	0	4.89E-01	4.89E-01	29	No
hexamethylene-di-isocyanate	0	9.50E-04	9.50E-04	2.00E-03	No
hexane	0	7.71E-03	7.71E-03	1.20E+01	No
iron oxide fume	0	1.34E-03	1.34E-03	3.33E-01	No
isopropyl alcohol	0	0.00E+00	0.00E+00	6.53E+01	No
Kaolin	0	3.52E-06	3.52E-06	1.33E-01	No
Manganese	0	7.95E-03	7.95E-03	6.70E-02	No
Mercury	0	8.08E-07	8.08E-07	3.00E-03	No
Methyl ethyl ketone	0	0.00E+00	0.00E+00	3.93E+01	No
methyl isobutyl ketone	0	0.00E+00	0.00E+00	1.60E+01	No
methyl n-amyl ketone	0	5.84E+00	5.84E+00	1.57E+01	No
methyl n-butyl ketone	0	7.38E-01	7.38E-01	13.7	No
Mica	0	1.41E-05	1.41E-05	0.2	No
Molybdenum	0	5.47E-06	5.47E-06	3.33E-01	No
n-butyl acetate	0	7.54E-01	7.54E-01	4.73E+01	No
n-butyl alcohol	0	0.00E+00	0.00E+00	1.00E+01	No
Naphthalene	0	2.85E-01	2.85E-01	3.33E+00	No
pentane	0	1.11E-02	1.11E-02	1.18E+02	No
phenanathrene	0	7.28E-08	7.28E-08	9.1E-05	No
phenol	0	0.00E+00	0.00E+00	1.27E+00	No
propyl alcohol	0	0.00E+00	0.00E+00	33.300	No
pyrene	0	2.14E-08	2.14E-08	9.1E-05	No
selenium	0	7.46E-08	7.46E-08	1.30E-02	No
silica	0	6.58E-03	6.58E-03	6.7E-03	No
silicon	0	1.57E-05	1.57E-05	6.7E-01	No
toluene	0	1.46E-05	1.46E-05	2.50E+01	No
trimethyl benzene mixed and individual isomers	0	2.08E-02	2.08E-02	8.20E+00	No
vanadium, as V2O5	0	7.15E-06	7.15E-06	3.00E-03	No
VM & P Naphtha	0	2.05E+00	2.05E+00	9.13E+01	No
xylene (o-, m-, p-isomers)	0	2.93E+00	2.93E+00	2.90E+01	No
Zirconium 2-Ethylhexanoate	0	4.96E-06	4.96E-06	3.33E-01	No
zinc oxide	0	3.03E-04	3.03E-04	6.67E-01	No

Carcinogenic Toxic Air Pollutant (Annual Average)	Restricted Controlled Hourly Emissions		Emission Change (lb/hr)	Screening Emission Level (lb/hr)	Controlled Emission Exceeds TAP EL?
	Pre-Project (lb/hr)	Post Project (lb/hr)			
2-Methylnaphthalene	0	1.03E-07	1.0E-07	9.1E-05	No
3-Methylchloranthene	0	7.7E-09	7.7E-09	2.5E-06	No
Acenaphthene	0	7.71E-09	7.7E-09	2.5E-06	No
Acenaphthene	0	7.71E-09	7.7E-09	9.1E-05	No
Acenaphthylene	0	7.71E-09	7.7E-09	9.1E-05	No
Anthracene	0	1.03E-08	1.0E-08	9.1E-05	No
Arsenic	0	6.2E-07	6.2E-07	1.5E-06	No
Benzene	0	9.0E-06	9.0E-06	8.0E-04	No
Benzo(a)pyrene	0	5.14E-09	5.1E-09	2.0E-06	No
Benzo(g,h,i)perylene	0	5.14E-09	5.1E-09	9.1E-05	No
Beryllium	0	3.73E-08	3.7E-08	2.8E-05	No
Cadmium	0	3.4E-06	3.4E-06	3.7E-06	No
Chromium +6	0	1.44E-09	1.4E-09	9.1E-05	No
Fluoranthene	0	1.28E-08	1.3E-08	9.1E-05	No
Fluorene	0	1.20E-08	1.2E-08	9.1E-05	No
Formaldehyde	0	3.2E-04	3.2E-04	5.1E-04	No
Naphthalene	0	2.61E-06	2.6E-06	9.1E-05	No
Nickel	0	2.30E-05	2.30E-05	2.7E-05	No
Polyaromatic Hydrocarbon (Max)	0	2.9E-06	2.9E-06	9.1E-05	No
Polycyclic Organics: 7-PAH Group	0	4.9E-08	4.9E-08	2.0E-06	No

Table 4-5 Facility-Wide Hazardous Air Pollutant Emissions
Johnson Thermal Systems, Inc.

Hazardous Air Pollutant	Unrestricted Uncontrolled Potential to Emit (tons/yr)	Restricted Controlled Potential to Emit (tons/yr)
Arsenic	2.7E-06	2.7E-06
Benzene	3.9E-05	3.9E-05
Beryllium	1.6E-07	1.6E-07
Cadmium	1.5E-05	1.5E-05
Chromium	1.0E-01	2.1E-02
Cobalt	8.9E-02	2.1E-02
Cumene	5.1E-03	1.2E-03
Dichlorobenzene	2.3E-05	2.3E-05
Ehylbenzene	2.1E+00	5.0E-01
Formaldehyde	1.4E-03	1.4E-03
Hexane	3.4E-02	3.4E-02
hexamethylene-di-isocyanate	5.8E-03	1.4E-03
Lead	9.4E-06	9.4E-06
Manganese	3.4E-02	2.3E-02
methyl n-butyl ketone	7.4E-01	1.8E-01
Mercury	3.5E-06	3.5E-06
Naphthalene	2.6E-06	2.6E-06
Nickel	5.4E-03	7.9E-05
Polycyclic Organic Matter (PAH MAX.)	1.3E-05	1.3E-05
Selenium	3.3E-07	3.3E-07
Toluene	1.5E-05	1.5E-05
TOTAL =	**3.12**	**0.78**

APPENDIX B – FACILITY DRAFT COMMENTS

The following comments were received from the facility on February 21, 2020:

PTC Comments

Facility Comment: In Table 1.1 the paint booth manufacturer should be Loren Cook and the Model is TCN-B.

DEQ Response: The requested change has been made.

Facility Comment: JTS proposes removing the NO_x hourly emission limit for plasma cutting operations from Table 2.2. There does not need to be an hourly limit since there is no applicable lb/hr standard and only monthly recordkeeping is required in Section 2.7. In addition, the permittee would have great difficulty and expense performing an approved monitoring or test method.

DEQ Response: Because the plasma cutting operations are limited on an annual throughput basis, the requested change has been made.

Facility Comment: JTS requests that DEQ remove the hourly emission limit for welding operations from Table 3.2. There does not need to be an hourly limit since only monthly recordkeeping is required in Section 3.6. In addition, the permittee would have great difficulty and expense performing an approved monitoring or test method.

DEQ Response: Because the welding operations are limited on an annual throughput basis, the requested change has been made.

Facility Comment: JTS requests that DEQ remove the hourly emission limit for abrasive blasting from Table 4.2. There does not need to be an hourly limit since only monthly recordkeeping is required in Section 4.6. In addition, the permittee would have great difficulty and expense performing an approved monitoring or test method.

DEQ Response: Abrasive blasting has throughput limits on both a daily and annual basis. As long as throughput limits are adhered to, the hourly emission limit is not exceeded. There is no additional testing required for the hourly emission limit.

Facility Comment: In Table 5.1 the paint booth manufacturer should be Loren Cook and the Model is TCN-B.

DEQ Response: The requested change has been made.

Facility Comment: JTS requests that DEQ remove the hourly emission limit for coating operations from Table 5.2. There does not need to be an hourly limit since there is no applicable standard. JTS requests that the $PM_{2.5}/PM_{10}$ and VOC lb/hr limits in Table 5.2 be deleted. In addition, the permittee would have great difficulty and expense performing an approved monitoring or test method.

DEQ Response: Because the facility is below regulatory concern (BRC) for $PM_{2.5}/PM_{10}$, daily coating limits are not required and the requested change has been made.

Facility Comment: In Table 5.3 the unit for wet painting material is gal/yr. For powder coating the numbers are in lbs/year. JTS proposes to add "lb/yr" in the Table.

DEQ Response: The requested change has been made.

Facility Comment: In Table 5.3 the wet coating are in gallons and the powder coating are in pounds. It is not appropriate to sum the wet painting liquid amounts and powder coating solid amounts.

DEQ Response: The annual total row has been removed from Table 5.3 to more accurately reflect coating usage.

Facility Comment: Permit Condition 5.7, JTS proposes eliminating the combined usage daily total limit. Table 5.4 limits the daily use of each wet painting and powder coating product and a total doesn't help assure compliance with a standard or limit.

DEQ Response: The requested change has been made.

Facility Comment: In Table 5.4 the unit for wet painting material is gal/day. For powder coating the numbers are in lb/day. JTS proposes to add "lb/day" in the Table.

DEQ Response: The requested change has been made.

Facility Comment: In Table 5.3 the daily max usage limits for Sherwin Williams Recoatable Epoxy Primer – B67A5 and Sherwin Williams Recoatable Hardener – B67V5 were entered incorrectly in the emission inventory. The primer and the hardener will be used at 1:1 ratio in daily operations, and the daily usage limits for both coatings are 16 gal/day. The annual usage limits for both coatings remain the same in Table 5.3.

DEQ Response: The requested change has been made.

Facility Comment: Permit Condition 5.15 please add a reference to Table 5.5.

DEQ Response: The requested change has been made.

Facility Comment: In accordance with the proposal to delete hourly PM, VOC, and HAP limits, the first 3 requirements (bullet points) would be removed from Permit Condition 5.16.

DEQ Response: The requested change has been made to remove daily emission calculations.

Facility Comment: What does solids content or VOC content have to do with identifying and estimating HAP emissions (bullet point 6) of Permit Condition 5.16? Would JTS only apply the below detection content calculation to HAPs?

DEQ Response: Bullet point 3 of permit condition 5.16 has been changed to state that the corresponding content shall be assumed equal to the coating density divided by 100 when estimating emissions. There was a typographical error that referred only to HAP content.

Facility Comment: This provision (bullet point 8 of Permit Condition 5.16) is acceptable assuming that hourly PM, VOC, and HAP limits are removed from Table 5.2. Alternatively, the PM, VOC, and HAP limits could be BRC for PM and VOCs and major (10 ton / 25 ton) limit rather than Table 5.2.

DEQ Response: The hourly emission limits from Table 5.2 have been removed.

Statement of Basis Comments

Facility Comment: In Table 1 the paint booth manufacturer should be Loren Cook and the Model is TCN-B.

DEQ Response: The requested change has been made.

Facility Comment: In Table 4-5 of the PTC application, unrestricted uncontrolled HAP PTE is not provided. JTS calculated unrestricted uncontrolled HAP emissions and updated the emission inventory. Consequently, JTS made a few changes to Table 3 based on the calculations.

DEQ Response: The requested changes have been made.

Facility Comment: The post project 24-hour average emission rates the ethylbenzene, methyl-n-amyl ketone, silica, VM&P naphtha, xylene (o-, m-, p- isomers), and zinc oxide changed slightly in Table 6 due to the changes of daily max usage limits for Recoatable Epoxy Primer and Recoatable Hardener. The updated emission rates of these chemicals remain below their respective screening emission levels.

DEQ Response: The requested changes have been made.

Facility Comment: While JTS was updating Table 4-5 in the emission inventory to include the unrestricted uncontrolled HAP PTE, JTS identified a few errors in restricted HAP emissions, and made corrections. As a result, JTS updated the emission inventory and Table 8. JTS carefully reviewed the other tables in the emission inventory and did not find any other errors.

DEQ Response: The requested changes have been made.

APPENDIX C – PROCESSING FEE

PTC Processing Fee Calculation Worksheet

Instructions:
Fill in the following information and answer the following questions with a Y or N. Enter the emissions increases and decreases for each pollutant in the table.

Company:	Johnson Thermal Systems Inc.
Address:	1711 Slipstream Way
City:	Caldwell
State:	ID
Zip Code:	83605
Facility Contact:	Taylor Bowman
Title:	Safety Co-ordinator
AIRS No.:	027-00150

N	Does this facility qualify for a general permit (i.e. concrete batch plant, hot-mix asphalt plant)? Y/N
Y	Did this permit require engineering analysis? Y/N
N	Is this a PSD permit Y/N (IDAPA 58.01.01.205.04)

Emissions Inventory			
Pollutant	Annual Emissions Increase (T/yr)	Annual Emissions Reduction (T/yr)	Annual Emissions Change (T/yr)
NO_X	3.3	0	3.3
SO_2	0.0	0	0.0
CO	1.5	0	1.5
PM10	0.5	0	0.5
VOC	0.0	1.5	-1.5
Total:	0.0	1.5	**3.8**
Fee Due	$ 2,500.00		

Comments: